

APPENDIX E

RESPONSES TO PUBLIC COMMENTS ON THE

DRAFT CHECKLIST ENVIRONMENTAL ASSESSMENT DATED AUGUST 21, 2001

FOR THE FINAL RECLAMATION PLAN FOR THE C.R. KENDALL CORP.

CR KENDALL MINE

The excerpts quoted below are taken from the comment letters. Not all text was quoted; only the material needed to express a specific concern. All comment letters are on file at DEQ and the entire content of each letter can be reviewed during business hours. Material in brackets [] have been added by the agencies when it was determined some clarification was needed.

Letter from Marv Hoffer, dated September 3, 2001:

1. *Hoffer comment A:* "Paramount to the mandatory EIS, fully recommended below at (B) and subsequent total decontamination, rehabilitation, and reclamation of the entire permitted mine area and all past, current, and future off-site effects is the immediate by November 1, 2001, development\full replacement of water quality and quantity by and at the Canyon Resources (Kendall) mine company expense to pre-mine conditions, quantity and quality for all degraded and/or destroyed private and public water sources and resources. Conventional wells and pumping facilities to a distant use are the most effective and immediate solution in part. We explicitly know that ultimate mine restoration which specifically must be directed at the watershed it destroyed will require massive efforts and years to resolve. We will not, cannot wait on full hydrologic functional restoration of destroyed springs, streams, and seeps to supply our public and private resources with pre-mine water quantity and quality. In addition, Canyon Resources (Kendall) should be held liable for the lost economic resources by public and private interests over the past year of mine operation with interest. ..."

Response to Hoffer comment A: The Draft EA only addressed reclamation of the leach pads and remaining waste rock dumps. Hydrologic restoration was not addressed in the Draft EA. The act does require plans to control and mitigate discharges to surface or ground water (MCA 82-4-335(1)(m)) and "the reclamation plan must provide sufficient measures to ensure public safety and to prevent the pollution of air or water and the degradation of adjacent lands" (MCA 82-4-336(10)).

DEQ has received numerous complaints regarding impacts to surface and groundwater over the years. The Metal Mine Reclamation Act (MMRA) requires that a documentable loss of a primary source of underground water be replaced by the operator by water "in like quality, quantity, and duration." (82-4-355 MCA). DEQ has investigated these complaints as required by the MMRA. In most cases, DEQ has not been able to document a significant loss in the quality and quantity of downgradient waters and so has not required C.R. Kendall

Corp. to replace potentially affected waters. However, DEQ and DNRC have concluded that the pumpback systems can cause depletion of alluvial groundwater immediately downgradient of the seepage interception systems. This can result in reduction of flow in streams and alluvial-fed springs directly downstream of the pumpback locations. Consequently, DEQ has required via administrative order that C.R. Kendall Corp. return water to the South Fork Last Chance Creek and Little Dog Creek. The amount of water to be returned is to be in quantities similar to that removed from those drainages by the pumpback systems. The company is fulfilling this requirement by pumping water from the mine's supply wells to these streams.

DEQ does not agree that there is an immediate need for development and full replacement of water quality and quantity at this time. CR Kendall is returning water to streams where the pumpback systems may be affecting water rights. DEQ will investigate the impacts to hydrologic resources using a third party contractor and will include results of that analysis in the EIS.

DEQ has no authority to require that CR Kendall reimburse the state or private parties for lost economic resources.

2. *Hoffer comment B:* "A completely new Environmental Impact statement (EIS) to be immediately (Oct. 1, 2001) initiated and completed by no later than May 1, 2002 (7 months action time over winter, plus 30 days to solicit a contractor) by an acknowledged professional, reputable contract environmental evaluation firm paid for by the Canyon Resources company, but exclusively selected and administered jointly by the MT. DEQ, DNRC and US BLM with public oversight responsibility will meet the requirements of MEPA-NEPA and the ultimate identification of what the problems are and potential solutions.

This EIS must be a joint, a cooperative NEPA (federal US BLM) and the MT. DEQ-DNRC signature EIS, and cooperatively prepared for public evaluation and decision as to what correction actions to take. Both the federal government (US BLM) and state of MT. Governments were, and are, legally and directly involved at the initial permitting process stage and continued to have legal administrative responsibilities under NEPA, MEPA, and other laws and police since then to date. ..."

Hoffer comment C: "In that the US BLM was a federal land administration agency when this mine was permitted (legal federal-state written sanctions) jointly b BLM and MT DEQ, it is mandatory under

NEPA and MEPA that the above Joint BLM-MT DEQ EIS be cosigned by US BLM on behalf of the federal government and MT. DEQ on behalf of the MT. Citizens. ...”

Hoffer comment D: “Bear in mind, we, the public, and numerous other non-Montana state and federal agencies and organizations, have addressed similar problems long ago and well know the process to develop viable solutions, specifically the Joint Federal-MT State EIS. ...”

Response to Hoffer comments B, C, and D: A separate EA for reclamation was done in order to reclaim the site as quickly as possible after DEQ obtained the reclamation bond. DEQ assumed this was best for all involved. DEQ agrees that an environmental impact statement (EIS) should be prepared to address both reclamation and hydrology issues raised by the public.

BLM has no involvement in the Kendall Mine or its reclamation plan. BLM does not have authority to impose any federal regulations on private lands. Therefore, BLM has no jurisdiction under their regulations over the privately owned surface lands and minerals at Kendall. Since BLM does not have a decision to make, and that is the primary purpose and objective of all NEPA analysis, BLM will not be participating in the preparation of the EIS. DEQ will prepare the EIS with assistance from DNRC with regard to water rights issues.

The MMRA does not require restoration of a mine site but rather reclamation of a site to an approved post-mining land use. MMRA does require protection of water resources and since that was not addressed in the Draft EA, it needs to be covered in an EIS. The EIS will encompass the no-action alternative, the proposed action alternative, and a range of other alternatives.

3. *Hoffer comment E:* “A series of public field evaluation tours of the entire watersheds and permitted mine areas must [be] effected immediately, led by the MT. DEQ, MT DNRC, and USBLM jointly to permit the adjacent private land owners, the general public, and governmental agencies\staff to discuss on site the problems and potential solutions. ...”

Response to Hoffer comment E: DEQ will request that C.R. Kendall Corp. allow public field trips to the Kendall mine as part of the scoping and analysis process required by MEPA for the EIS.

4. *Hoffer comment F*: "I recommend the following Viable Proposed Action as the Preferred Alternative per the NEPA-MEPA process for the Joint Federal-MT. EIS:

- (1) Remove all waste material, rock, debris, etc. from all pits, repositories, sites to original non- mined bedrock. Absolutely do not include any cyanide heap-leach waste material, spoil, etc....
- (2) Line the entire bottom, sides of all mine pits from bedrock up with pure bentonite (clay) for a depth of 3-5 feet, cap with a heavy impervious synthetic material liner, topped with non-contaminated "topsoil" and clean material to protect the liner from the waste rock, material, debris. The pit sidewalls must be shaped to accommodate application and retention of the bentonite in a progressive manner as the toxic mine wastes (non-heap-leach) are back-filled. ...
- (3) Backfill all pits to pre-mining profile, contours, e.g. original (pre-mine) watershed profile. The result will be absolutely no "highwalls", exposed bedrock, or sulphuric acid-generating geology or materials. Cap with 5-6 feet of bentonite clay, overlaid with non-contaminated soil high in clay, then top off with at least 3-4 feet of non-toxic "topsoil" suitable to grow and sustain native plant ecosystems without human support, e.g., fertilization, watering, herbicides, etc. In short, re-establishment of the pre-mining environment and plant communities, and functional watershed minus human-caused toxic materials, waste dumps, [and] contaminants. ...
- (4) It is recognized that the creation of pits by mining created a larger volume of waste rock, "acid mine drainage" source material than can be placed in the same pits from which it came. There is, will be an excess of mining waste rock, spoil, etc. This will require designation and placement of same in a non-pit environment and entombed in the same manner as a mine pit. Absolute care must be taken to not place [this material] in a functional watershed stream course or drainage, but placed in an isolated basin. ...
- (5) Revegetate the entire entombed toxic waste rock and materials pits after placement of at least 3-5 feet of "topsoil" which will not rupture or [threaten] the clay seal. Topsoil should be deep enough so that conifers, shrubs, etc. roots do not penetrate the clay seal and destroy its integrity to preclude water percolation into the toxic waste rock, spoil.
- (6) Reroute all original (pre-mine streams, watercourses around all entombed waste rock-spoil pits. ...
- (7) Isolate all mine cyanide heap-leach and similar toxic wastes-spoils from all waste rock pits, repositories. Never permit any mixture of waste rock and cyanide heap-leach toxic materials, anywhere, anytime. Definitely do not place any cyanide heap-leach and similar toxic wastes spoils in or on the waste rock entombed pits. ...
- (8) Effect an immediate action, a comprehensive and aggressive decontamination of all cyanide heap-leach and similar source toxic hazardous materials on site entirely separate

from the entombment of the toxic waste rock. The isolation of these extremely toxic materials is critical to begin restoration of our public surface and ground water sources, and to preclude further contamination by heavy metals, nitrates, cyanide and other mining toxic wastes of our critical water resources. ...”

Response to Hoffer comment F(1-8): The alternative proposed will be considered for incorporation into the EIS. The agencies will address a range of alternatives suggested by the public such as completely backfilling the pits, moving selected materials into the pits and reclaiming other materials in place, reclaiming everything in place, and doing what is already permitted (the no-action alternative). Capping and lining alternatives will also be covered. DEQ is considering using a process such as the Multiple Accounts Analysis process that was used for the supplemental Final EIS for the Zortman and Landusky Mines to develop the range of alternatives. This process is an iterative process of considering possible reclamation measures under a central theme, evaluating the effectiveness of the reclamation alternatives and then revising the alternatives to optimize their effectiveness. A technical working group comprised of DEQ, DNRC, third-party consultants, and the public would use the process to develop alternatives that addressed public concerns and that would meet legal reclamation requirements. Alternatives would be developed that could be implemented with the reclamation bond available as well as other alternatives not constrained by the existing reclamation bond amount. The decision maker would select the alternative that meets the needs and objectives identified in the EIS and complies with state environmental laws and regulations regardless of cost. In the case of an EIS, the decision maker would be the DEQ Director, Jan Sensibaugh,

5. *Hoffer comment G:* The naive, of questionable legality, and grossly deficient “check list ea” process and product being attempted by DEQ violates the MEPA and NEPA. It would serve only to further misdirect our public finances and efforts (by DEQ, DNRC, and US BLM) and result in continued failure to resolve the massive contamination of this critical watershed. More importantly, this irrational attempt to “divide and conquer” the problems and “solutions” into separate subjects, “eas”, (“reclamation, water, etc.) is known in federal legal circles as “Piece-Mealing” and was declared in federal court decades ago as “Illegal.” It is also illegal per MEPA.

MEPA, NEPA mandate that the entire proposed action and potential enlargement thereof must be comprehensively evaluated for all positive and negative ENVIRONMENTAL EFFECTS on, and off-

site BEFORE any actions are taken, or government sanctions are issued. ...Disregard this illegal "checklist EA" entirely and initiate the Joint federal-state EIS immediately."

Response to Hoffer comment G: See response to item 2 above. MEPA requires at least an environmental assessment (EA) be prepared. Under MEPA, one of the possible conclusions that can be reached in the EA process is that there are potentially significant issues and that an EIS should be prepared. As stated in the Draft EA, the preferred alternative listed in the Draft EA was not final. Additional data collected since the EA was released and data proposed to be collected for preparation of the EIS may result in changes to the preferred alternative.

DEQ agrees that separate environmental documents for reclamation and water management, checklist or otherwise, should not be prepared. DEQ tried to respond to public concerns about reclamation by reclaiming the site as soon as possible once the reclamation bond had been secured, hence the EA for the reclamation portion of the project. DEQ agrees that there are potentially significant issues at the mine, especially related to water treatment and that evaluation of the reclamation cover and water management plans must occur in one document. DEQ has concluded that an EIS must be prepared and that it must address all issues.

6. *Hoffer comment H:* "The avowed "reclaimed" mined areas is fraudulent, a doomed and desperate attempt at restoration of this devastated watershed and less than candid as to apprising the public about the massive problems which appear to be either ignored or hidden, and viable potential solutions. The public is suspect as to who is directing our environmental laws and protection processes in this matter, our public employees, e.g. DEQ, US BLM, DNRC, or the mining company.

Response to Hoffer comment H: CR Kendall has reclaimed 292 out of 460 acres of its total disturbance during operations. The reclaimed areas largely comply with the existing approved permit. Additional data and monitoring collected by DEQ in the summer of 2001 have determined that problems are occurring on the reclaimed acres that were not realized at the time of the Draft EA. DEQ has also noticed that some vegetation on reclaimed areas irrigated with water from the heap leach pads has not been successful. This may be related to the application of process water. DEQ will reevaluate existing reclaimed areas in the EIS. In addition, recent observations of the heap leach pad materials indicate that there may be high levels of salts. This may be the result of CR Kendall incorporating the brine from the

reverse osmosis water treatment plant into the pad. There is no volunteer vegetation growing on the pads, possibly as a result of the salts. These are other reasons why DEQ has decided to prepare an EIS.

DEQ is responsible for upholding the various state mining reclamation, and water quality laws and regulations approved by the Montana State legislature. The mining company has no authority to modify those laws and regulations.

7. *Hoffer comment I:* “It was well known by the US BLM and MT. Environmental agencies prior to any cyanide heap-leach gold mining began at Canyon Resources (Kendall) that the touted “bond” values were grossly inadequate, why they were massively insufficient, and what they should be. The resultant bond for the massively destructive mining on public and private land was politically dictated, and totally rejected scientific and experienced staff and evidence. ...”

Response to Hoffer comment I: Bond calculations were estimated based on the approved reclamation plan and reclamation costs at the time. DEQ calculated the bond for the reclamation dirt work needed at Kendall according to the proposed action discussed in the Draft EA. That proposed action would have cost about \$1.7 million. That did not include the costs of water treatment. The total bond calculated by DEQ in June 2000 for reclamation and water treatment as discussed in the Draft EA equaled \$14.2 million.

8. *Hoffer comment J:* “The DEQ statements, intent, as made at the public meeting, Lewistown, MT., 8-31-01, that DEQ intends to “do a separate and another environmental assessment (EA) to address water (I assume quality and quantity, etc.)” separate from “mine reclamation” is simply astounding and illegal per the MEPA, and any rational environmental process. ... The NEPA\MEPA mandated solution: Abandon the aborted and totally illegal “checklist EA” ritual as an independent effort by DEQ, and initiate the Joint federal-state EIS immediately. ...”

Response to Hoffer comment J: See responses to items 2 and 5 above.

9. *Hoffer comment K:* “If MT. DEQ, DNRC, etc. attempt to continue to circumvent MEPA, NEPA, and the EIS process, they will simply be illegally squandering our limited financial capacity, will underwrite mining company violations, and guarantee that the public will continue to have no confidence in the DEQ, DNRC, US BLM employees and administrators to effect public law and policy to protect the MT. public and its critical environmental resources. The greatest threat from the aborted MT DEQ-DNRC-

US BLM and Canyon Resources mine is that the state and federal agencies would give Canyon Resource mine company a “clean bill of health” document, thereby releasing them from complete and legally-mandated reclamation of the entire massive mining-generated problems. Then obligating in perpetuity the MT. and American public with solving and financing the massive mining-caused reclamation problems. ...”

Response to Hoffer comment K: DEQ intends to insure that the requirements of MEPA, the MMRA, and the Montana Water Quality Act are met.

10. *Hoffer comment L:* “The ultimate solution is for the MT. public to transfer this massive, and correctable, problem to the federal Environmental Protection Agency (EPA) and declare the Canyon Resources (Kendall) mine area a federal superfund site. This in my opinion is the only means to accomplish a complete and an effective reclamation of the Canyon Resources (Kendall) mine devastation. ...”

Response to Hoffer comment L: DEQ does not agree that superfund status is warranted at the Kendall Mine. Montana cannot simply transfer a site to EPA for superfund cleanup. EPA has criteria for prioritizing sites for cleanup. Sites generally must be on EPA’s National Priorities List for EPA to take action. It is doubtful that this site would qualify for the National Priorities List.

11. *Hoffer comment M:* “At least 2-3 field examinations of the entire affected geographic area, entire watershed, downstream locations including Warm Springs Cr., Big Spring Creek are required now: schedule 2-3 different dates beginning Sept. 10, 2001. Give all publics a full and informative tour of the entire ground situation including adjacent areas, above, at the sides, and below the entire mine.”

Response to Hoffer comment M: See response to item 3 above.

Letter from Clair O. Clark, dated September 4, 2001:

12. *Clark comment A:* “Gather all the limestone waste rock material that was scattered over the 460 acres, or more, of land and place it in, or on top of one of the five Pits that were dug in the area. That must include the large pile of limestone waste rock that was moved over into the upper drainage of the draw that drains down into the Boy Scout’s swimming pond behind the dam.

This is a must, because the weathering of the limestone rock fragments in the upper drainage is already starting to pollute water in the dam.

This Boy Scout area is for their education of the outdoor environment, plants, wild life, and the Boy Scout philosophy. This is very important to the Boy Scouts of Montana and Fergus County.”

Response to Clark comment A: See Response to item 2 above. The alternative of completely backfilling the pits will be analyzed in the EIS. It is not physically possible to place all of the material back into the pits as total volume increases when rock is broken (“swell factor”).

The issue of potential pollution in the pond at the Boy Scout camp will be addressed in the EIS.

13. *Clark comment B:* “After filling and shaping of the five deep pits, and using bentonite for a layer sealer in the pits, then a layer of bentonite must be placed over the top of each pit to stop the inflow of water from snow melt or rain into the pit to stop the weathering of the porous limestone rock fragments into pollutants that will move on down slope to pollute the surface and underground waters. Then a significant layer of stockpiled topsoil suitable for plant growth should be placed over the bentonite layer.”

Response to Clark comment B: Various capping alternatives will be considered in the EIS including the one suggested. Capping alternatives would have to provide whatever level of protection is determined to be necessary for water quality as well as provide sufficient growth medium for revegetation.

14. *Clark comment C:* Recommendations for most economically viable engineering options for remote area decontamination of several acre feet of surface runoff and leachate [and] mining water [from the] tailings which include significant amounts of cyanide, heavy metals, salts, silicates, and saturated miners.

Reverse Osmosis (RO) is the most cost-effective method of desalting water using about 30% [of] the energy required to distill water to a solid. RO costs as little as \$600 per acre-foot to desalt high-quality deep-well water (200 parts per million sodium equivalents) and as much as \$1,200 per acre-foot to desalt high-quality sea water (35,000 ppm sodium equivalents) when no pretreatment is

required. In the case at Kendall, a significant pre-treatment will be required to prevent membrane fouling. This will significantly increase RO technology de-watering costs.

Design a process which is largely portable (truck mounted) which would be only used in summer months when temperature is high and humidity low. After two seasons, one-site is cleaned-up, then the equipment would be moved to the next mining waste site for remediation. The ponds would have to be graded over, and pond liners would have to be disposed. ...”

Response to Clark comment C: DEQ will investigate several alternative methods of water treatment including land application disposal on-site as well as off-site, reverse osmosis, etc. The analysis will look at the impacts of each alternative. This will include determining if the metals and salts in the water or soil would affect vegetation or animals eating the vegetation. If pretreatment is necessary for successful operation of a water treatment system, then that will also be evaluated. If a reverse osmosis water treatment is determined to be necessary, the DEQ would have to determine what would be done with the brine generated by the system.

15. *Clark comment D:* “We need a new EIS and a detailed plan. I realize it will cost more money than the \$1,869,000 provided to DEQ. It will take a superfund designation and a new detailed plan to clean-up this problem at the CR Kendall mine site. Total cleanup costs for [the] entire mine including solid salt-cake waste disposal will probably be in the neighborhood of 9 to 15 million dollars.

A primary contractor/engineering firm must be chosen to make engineering cost estimates and design, construct, and deliver such a complete package solution to help DEQ prepare a detailed total reclamation plan for CR Kendall mine area.”

Response to Clark comment D: See response to items 9 and 10 above. DEQ will acquire the services of a third-party consultant to help develop and analyze the effects of various alternatives in the EIS.

16. *Clark comment E:* “In the short-term we need to develop a plan that will give the ranchers water for their livestock use by Nov. 1, 2001. The mine company illegally took water from public and private water sources that must be fully replaced, quality and quantity, off-site to local residents by Nov. 1, 2001, at mine company expense (e.g. wells).

Response to Clark comment E: See response to item 1 above.

Letter from Maurice Shammel, dated September 4, 2001:

17. *M. Shammel, paragraphs 3 and 3:* "It is apparent that the proposed Draft EA is inadequate to meet the requirements of what needs to be done to eliminate the ground water contamination problems that have resulted from the waste rock dumps, leach pads and other mine activities. The mule shoe waste rock dump was recovered with subsoil and topsoil, and seeded some time back; yet the selenium content of our Sec. 29 spring is still .009 ppm on the last report (July 2001), even with the pumpback system in operation. This is little or no improvement from when the pumpback system first started several years back. We get by with this because of the water pumped from WW6 or WW7 to our tank which dilutes the contamination from our spring. Our spring water had minimal contamination contaminants in it before the operation of this mine as shown on the water analysis reports I sent you in June, 2000.

It appears that some barrier – an impermeable clay layer or geotextile – should have been put in place before the subsoil and topsoil were placed. Therefore, merely placing topsoil on the remaining areas to be reclaimed is inadequate to correct a constantly recurring ground water contamination problem. These contaminants, in their water carrier, seem to just be kept circulating, time after time, from the pumpbacks – sprayed on the surface to filter down through to the pumpbacks – to start their journey again, for the most part. The other alternative, which has been proposed numerous times, is to treat this water to remove the contaminants and then let the cleaned water flow down it's natural drainage."

Response to M. Shammel, paragraphs 2 and 3: See items 1, 6, 13, and 14 above. DEQ agrees that the water quality issues need to be addressed in an EIS. The EIS will also evaluate the success of existing reclamation completed on the site and consider the need for additional caps and liners.

18. *M. Shammel, paragraph 4:* "The proposal to apply this pumpback water off the mine site, thereby increasing the area of contamination is totally unacceptable. There is the risk of contaminating even more area downslope from this additional contaminated area; notably more of the Little Dog Creek and Last Chance Creek "drainages."

Response to M. Shammel, paragraph 4: See response to item 14 above. After the Draft EA was released, DEQ staff noticed that vegetation on reclaimed areas irrigated with water from the heap leach pads has not been successful. This may be related to the application of

process water. The EIS will address the suitability of the water for long-term irrigation with and without treatment and the potential impacts to surface waters as well as vegetation and livestock.

19. *M. Shammel, paragraph 5*: "I am in agreement with the suggestion made at the Aug. 30th meeting, that a reputable and knowledgeable engineering firm be consulted before proceeding with further reclamation work, to solve this water contamination problem."

Response to M. Shammel, paragraph 5: See response to items 9, 10 and 15 above.

20. *M. Shammel, paragraph 6*: "Regarding the seed mix used on the reclaimed areas: Is the plant known as common mullein a species recommended to be part of the seed mix? This plant is a worthless weed which no animal grazes on, and which uses water and nutrients which could be better utilized by beneficial grasses and forage. The seed from this mullein blows down on our adjacent pastures where it germinates and grows. I have spent many hours eradicating this weed from our land. We never had this weed before this mine operated."

Response to M. Shammel, paragraph 6: Common mullein is not part of the reclamation seed mix. It is a species that invades disturbed sites and can often be found along road cuts and burned areas. It is not considered a noxious weed. Mullein populations are spreading across the state. DEQ will address the weed control problems and control practices for the mine in the EIS.

Letter from Jack, Ida, Bob, and Vicky Ruckman, dated September 6, 2001:

21. *Ruckman, paragraph 1*: "We have been working with the DEQ and the DNRC for over three years to rectify our water shortage and we are still at square one. The DEQ has done nothing in its capacity as a government agency bound by state laws to protect Montana and its citizens from the pollution caused by mining activity at C.R. Kendall. However, it appears that the DEQ has gone at great lengths to bend the laws in favor of C.R. Kendall Mine."

Response to Ruckman, paragraph 1: See response to item 1 above. DEQ will hire a third-party consultant to help determine the source of the reduction or impairment of water resources in adjoining private properties. The potential effects of the multi-year drought that

is being experienced throughout Montana and the potential effects of the mine will be included in the EIS analysis.

22. *Ruckman, paragraph 2*: “At the public meeting last week [it was] very carefully pointed out that the DEQ only has \$1,860,000 for reclamation and it isn’t certain if any monies will be available from the \$8 million appropriated by the State Legislature last spring for mining reclamation at C.R. Kendall. Whose fault is that? As concerned neighbors, we have been involved with the DEQ and mine since the permitting process and have questioned several times the amount of the reclamation bond. Frankly, the DEQ screwed up and now this family and our neighbors are paying dearly for your [agency’s] mistakes.”

Response to Ruckman, paragraph 2: See response to item 7 and 9 above.

23. *Ruckman, paragraph 3*: “C.R. Kendall claims to have the oldest water rights, theirs dating back to the early 1900’s. However, Ida Ruckman’s water rights on South Fork of Last Chance date back to 1898. On March 25, 1998, the Ruckman families filed a formal complaint with the DSL over our loss of water. In a letter to Scott Irvin from Conrad Parrish dated march 18, 1999, Conrad Parish states “It is not possible to determine which water rights are alleged to be impaired, nor is it possible to determine the degree the rights are alleged to be impaired”. We have no water ...our springs are dry. What part of NO WATER don’t they understand” Because of contamination problems the mine installed a pump back system in 1996. On all the drainages, including South Fork of Last Chance, the mine then sucked out the water through monitoring wells, captured all the runoff from melting snow and rains, and evaporated this water through the pump back system was water that would come to us through our drainage in the natural course of events. For years the mine used dynamite during mining activities. Many water experts say that blasting changes the land table thereby disturbing nearby springs. Our land is less [than] ½ mile from the mine property and we feel that the dynamiting has had a direct impact on our springs, but yet the mine is apparently unable to determine what rights were impaired. We were under the impression that the law concerning water rights protected the person with the oldest water rights but yet this appears to be an incorrect assumption on our part. To us it appears the mine is in violation of our water rights, but since nothing has been done by the DNRC, it now seems to us to be one of those laws that have been “bent” for the mine.”

Response to Ruckman, paragraph 3: DEQ will work with DNRC to evaluate water right impacts in the EIS. DEQ will hire a third-party consultant to help determine the source of the reduction or impairment of water resources in adjoining private properties. The potential

effects of the multi-year drought that is being experienced throughout Montana, the potential effects of blasting and the pumpback systems will be included in the EIS analysis.

24. *Ruckman, paragraph 4:* “We received a letter from Conrad Parrish dated May 27, 1999, stating that C.R. Kendall would no longer be testing the water quality due to budget constraints. This was in conflict with the agreement made between the Ruckman’s and C.R. Kendall. In a Field Investigation Report dated October 6, 1997, Terry Webster states there appears to be off site contamination in Little Dog and South Last Chance yet the mine was allowed to discontinue the water quality monitoring in 1999. At the last public meeting in Hilger, Vicky stated her concerns about the water no longer being tested for the Ruckman’s, Shammel’s, or Harrell’s. She was assured by an official of the DEQ that the water quality [would] again be monitored, but to date no water testing has been completed.”

Response to Ruckman, paragraph 4: DEQ will request that C.R. Kendall Corp. re-sample the water supplies and streams on adjacent landowners properties. The forthcoming EIS will address the impacts to water quality and quantity, including cumulative impacts, and plans for long-term water monitoring.

Except for a short reach of the South Fork of Last Chance Creek which crosses the Ruckman and Harrell properties and supplies stock ponds, the Ruckmans’ and Harrells’ water supplies (springs) are not downgradient of either the Kendall Mine or its pumpback systems. The South Fork of Last Chance Creek continues to be sampled at several locations upgradient of the Ruckman and Harrell properties, between the mine and the Boy Scout Pond.

Monitoring of several spring sites on adjacent landowners’ properties was discontinued during the late 1990s because the springs were not hydrologically downgradient of the mine and thus could not become impacted either by release of contaminants by the mine or by withdrawals of shallow groundwater near the mine. Review of past water quality data from those springs confirmed the absence of contamination.

The consultants selected to prepare the EIS will review the potential need for additional regional water quality sampling.

25. *Ruckman, paragraph 5*: "Now is the time for the DEQ to do their job and clean up the mess at the C.R. Kendall mine. It needs to be done properly so that the next generations don't have to worry about their water quality and quantity as neighbors of the mine. The Ruckman family is requesting the DEQ to do a comprehensive environmental impact study on the C.R. Kendall Mine. We don't agree that the reclamation should be split into 2 parts. They go hand in hand and need to be addressed together. We don't need short-term resolutions, we need lifetime resolutions."

Response to Ruckman, last paragraph: See response to items 2, 5, and 8 above.

Letter from Montana Council, Boy Scouts of America, Raymond Chase, Scout Executive, dated September 10, 2001:

26. *B.S.A., first and last paragraphs*: "The Montana Council of Boy Scouts of America is an adjoining land owner to the CR Kendall Mine located at Kendall, Montana. ... We are concerned that the Closure Plan as modified by the EA will not adequately protect the recreation and drinking water resources at our K-M Boy Scout Ranch. "

"We are very concerned that the mine closure plan as recommended by the Environmental Assessment does not adequately protect our adjoining property of contamination of our water resources from arsenic and thallium laden leachate or runoff. Until our concerns are satisfactorily answered we must stand opposed tot he proposed surface reclamation plan."

Response to B.S.A, first and last paragraph: DEQ will assess the potential for impacts to surface and ground waters at the K-M Boy Scout Ranch along with other adjacent landowners in the EIS.

27. *B.S.A., paragraphs 3 and 4*: "From the review of the documentation we understand that prior to January 1999 DEQ concluded that a cap be placed over the leach pads and pit areas constructed of 12 inches of compacted clay overlain by 12 inches of drain material followed by 18 inches of subsoil and finally 10 to 14 inches of onsite topsoil. In June of 2000 an Environmental Assessment (EA) was completed by DEQ which concluded the cap profile should be changed to 19 inches of subsoil overlain by 17 inches of topsoil. Most recently DEQ has issued an EA abandoning the 19 inches of subsoil/waste rock in favor of allowing the cover to so consist of 17 inches of topsoil overlaying the in place leach pad or and mine waste rock. The cap which started out as 56 inches including an "impermeable" compacted clay liner system is proposed today as 17 inches of native topsoil.

It is our understanding that the closure cap is required to reduce the seepage of water, to commonly accepted standards, through the leach pad ore and mine waste ore and thereby substantially eliminate the development of arsenic and thallium laden leachate. From the information available from your web site, we can see no permeability test data to validate the claim that there is little or no difference between a cap system 56 inches in depth, constructed of compacted clay and the currently proposed cap constructed of 17 inches of native topsoil."

Response to B.S.A, paragraphs 3 and 4: See items above. The EIS will consider the various reclamation capping alternatives and address costs and benefits of each alternative. A better explanation of the differences in reduction of seepage between the previously permitted caps and what is being proposed will be provided in the EIS. Much of the change in material proposed to be used has to do with the chemical quality of the capping materials compared to the waste rock/ore material. It appears that some of the material that had been proposed for capping has as much thallium and/or arsenic as the material to be capped. Recent observations of the heap leach pad materials indicate that there may be high levels of salts. This may be the result of CR Kendall incorporating the brine from the reverse osmosis water treatment plant into the pads and pumping water captured below the pads back onto the pads. There is no volunteer vegetation growing on the pads, possibly as a result of the salts. The presence of salts make it necessary to re-evaluate the agency's preferred capping alternative in an EIS and also may raise questions as to the suitability of heap leach pad water for irrigation without treatment. Alternative capping materials, cap designs, and liners will be evaluated in the EIS.

28. *B.S.A., paragraph 5:* "We also have noted that the revegetation plan and the closure cap plan are in conflict with each other. DEQ states that revegetation establishment is critical to successful reclamation. In the report by Bighorn Environmental Sciences it is recommended that for optimal root growth and vegetation sustainability a loosely compacted soil be provided as the root bed. The closure plan on the other hand calls for compaction of the topsoil and subsoil to achieve designed infiltration targets. To the layman, it appears the present design can not accommodate both criteria."

Response to B.S.A, paragraph 5: DEQ will revisit the capping and reclamation criteria in the EIS. The apparent conflict between the "compacted" and "loosely compacted" criteria will be addressed.

29. *B.S.A., paragraph 6*: “Finally we have concern that erosion of the 17 inch topsoil cap, either by an abnormally high precipitation event or simply over time, may breach the closure cap, exposing the underlying leach pad to greater infiltration. We also have concern of absolute containment of runoff in drain channels, particularly those channels that may be on the perimeter of the reclamation site.”

Response to B.S.A, paragraph 6: DEQ will review the approved sediment and erosion control plan approved for the mine in the EIS. In the summer of 2001, DEQ noted some erosion problems on existing reclamation that need to be rectified. DEQ will address the erosion potential of several capping alternatives in the EIS.

30. *B.S.A., paragraph 8*: “Please provide us with comparative permeability test data showing seepage rated [for] compacted clay closure system[s] versus the currently recommended topsoil only system.”

Response to B.S.A, paragraphs 8: Permeability test data will be obtained for alternative cover systems to be addressed in the EIS.

31. *B.S.A., paragraph 9*: “Please explain how allowing presumably excessive infiltration through the leach pads and collecting and treating this hazardous water in perpetuity is favored over eliminating seepage with a more secure cap system and forever eliminating the infiltration of water.”

Response to B.S.A, paragraph 9: See response to item 27 above.

Letter from Alan Shammel dated September 2, 2001:

32. *A. Shammel, paragraph 2*: “The original design permitted for the leach pad, relied on the fact that there would be contaminants in the pad which need to be isolated from both water and the surrounding area. Thus, it was designed with an underliner and drain system and an impervious undercap (clay) with a drain layer over it and then the subsoil-topsoil layer. To remove this requirement is to remove the safety of the entire project. It would be inconceivable to allow the proposed cap design as it would allow contaminated water to exit the leach pad forever. It would also allow plants to take up these heavy metals and thus be ingested by any animal who grazed on the site.”

Response to A. Shammel, paragraph 2: See response to item 27 above.

33. *A. Shammel, paragraph 3:* "In the final closure plan located in the Lewistown Library, an astounding water management plan is detailed. No water treatment is planned, only mixing zones, diversion ditches carrying contaminated water, and a totally insane plan of "irrigating" 60 acres of a neighbor's land with 43,000 galls of contaminated water per year. Canyon Resources and the DEQ have hand in hand implemented a plan of a pumpback system which allow the "irrigating" of contaminated water all over the mine site. As we have pointed out repeatedly, all this does is spread contaminates as they do not evaporate. Now it is proposed to spread this contamination over another 60 acres?"

Response to A. Shammel, paragraph 3: See response to item 14 above.

34. *A. Shammel, paragraph 4:* "The public notice of this meeting in the Lewistown New-Argus includes a statement that a final water management plan will be prepared after CR Kendall prepares "an MPDES Permit". As we have repeatedly pointed out, it would be unlawful to give this company an MPDES permit. Permit requirements include a) the permit must be given prior to commencement of the project and b) the damage must be unavoidable. Water treatment systems are readily available which would clean up this contamination."

Response to A. Shammel, paragraph 4: See response to item 14 above regarding water treatment alternatives. As part of the analysis, DEQ will have to make a decision as to the applicability of an MPDES permit based on the preferred alternative selected. Except for the temporary provisions of an Administrative Order issued by DEQ as part of an enforcement action, CR Kendall cannot be authorized to discharge water that has been in contact with mine wastes from the mine site, whether the water has been treated or not, to state waters without an MPDES permit.

35. *A. Shammel, last paragraph:* "It is becoming increasingly clear, both by Canyon Resources' and the DEQ's failure to comply with the laws of Montana, and the lack of expertise in dealing with the reclamation of this project, that a comprehensive EIS must be prepared."

Response to A. Shammel, last paragraph: See response to item 2 above.

Letter from Dick and Marlene Hassler dated September 7, 2001:

36. *Hassler, paragraph 2:* "The suggestion to move the Kendall Waste Rock Dump into the Kendall Pit deserves serious consideration. Yes it would cost dollars now. But the Boy Scout Camp that serves thousands of youth each year would be guaranteed their safe future."

Response to Hassler, paragraph 2: See response to items 4, 10, 12 and 26 above.

37. *Hassler, paragraph 3:* “The leach pads to be covered by topsoil is the most desirable action. We are very much opposed to ‘sealing’ the leach pads with bentonite or other materials. Not enough research has been done to know the future effects with Mother Nature in ten, twenty, or fifty years. And we certainly do not want to impose these problems on future generations.”

Response to Hassler, paragraph 3: See response to items 13, 27, and 28 above.

38. *Hassler, paragraph 4:* “For fire fighting in the North Moccasins we would like one pond to remain or a large reservoir to be built below the plant. We have an agreement with the Mine, State, and BLM to use this water for fire suppression by using a helicopter dipping/dumping. All the well [should] be sealed and water [should] NOT be piped anywhere for anyone.”

Response to Hassler, paragraph 4: DEQ will analyze the potential for leaving a pond on the site for fire fighting purposes. Monitoring wells will have to remain accessible and cannot be sealed until such time as it is determined that they are no longer needed. The EIS will evaluate the level of impacts to area water resources and address ways if needed to replace water supplies that may be impacted.

39. *Hassler, paragraph 5:* “One concern we have – what if this property is sold in the near future? Would the new owner be responsible for reasonable cleanup? And in a reasonable length of time? And how much would the State be involved?”

Response to Hassler, paragraph 5: As with most properties, if it is sold then the liability for the site could be transferred to the new owner. If there are outstanding reclamation and water treatment obligations, then the new owner would have to continue with the cleanup.

Letter from the Mineral Policy Center and the Montana Environmental Information Center dated September 10, 2001:

40. *MPC and MEIC, paragraphs 2 to 4:* “Even though MEIC and MPC cannot find enough adequate information in this checklist EA upon which to base our comments, we nonetheless thank you for the

opportunity. It is our opinion that this EA needs to be scrapped and the Department should undertake production of a comprehensive environmental impact statement on reclamation at the Kendall Mine.

The cover letter included with the draft EA states, "CRK applied for an Amended Closure Plan to Operating Permit 00122 on March 8, 2001." Even though the document never states so, it is our assumption that it is this March 8, 2001 plan the EA is meant to address.

On page 2, the EA states, "This EA does not address the proposed water management plan changes." One can only conclude from this statement that there are water management plan changes in the Amended Closure Plan that need to be addressed. The question must be asked, why weren't they included in this EA? If the EA has been produced to address the impacts of the Amended Closure Plan, it must include changes to the water management plan as well. Furthermore, MEPA expressly precludes breaking a project into smaller components with an EA analysis simply to avoid an EIS. Water management issues are so interrelated to leach pad cover issues that they cannot be separated into separate analyses. We reiterate our request that this EA be scrapped and an EIS be produced that deals with all the reclamation and water management issues at Kendall."

Response to MPC and MEIC, paragraphs 2 to 4: See response to items 5 and 18 above.

41. *MPC and MEIC, paragraphs 5 to 10: "As to what the EA does address, changes in the amount of soil cover in different areas of the mine, the information is incomplete as well and is inadequate to formulate detailed comments on the proposal."*

Attached to the EA is a document entitled "Kendall Mine: Comparative Coversoil Evaluation and Revegetation Recommendations". While this document is more detailed than anything in the EA it still falls short. Not enough information is presented regarding the composition of the leach pad or coversoil material beyond potassium, phosphorous, nitrate and arsenic, and if other constituents are present what impact they will have on revegetative success and post-mining land use.

Capillary rise in revegetated plants is an issue not addressed in the report. Capillary rise has posed significant problems on reclamation at Montana's coal mines for post mining land use and needs to be addressed in this instance as well.

Furthermore, this report is laced with statements ... that indicate more information could be gathered, analyzed and used to formulate better conclusions.

Finally, MEIC and MPC object to the proposed changes in the reclamation plan that are addressed by the EA. We believe the Department erred last year when it approved the plan to reduce the reclamation covers from 54 to 36 inches. We also feel the Department was correct when it denied CRK's request for only 22 inches of cover. What we cannot understand is how the Department denied CRK's request last year but appears willing to approve a proposal for even less cover this year. If such a change is warranted, the information justifying that change is not present in the Checklist EA."

Response to MPC and MEIC, paragraphs 5-10: See items 13, 27, and 28 above. DEQ will reinvestigate the proposed reclamation plan to address the issues of other constituents in the leach pad and cover soil, capillary rise, revegetation potential, and the change in capping designs and thickness. Justification for the changes will be provided in the EIS.

Letter from Dan, Lori, Lewis, and Mona Harrell dated September 19, 2001

42. *Harrell, paragraphs 1 and 2:* " We feel the EA as written is terribly inadequate. Water quantity and quality are not addressed. Restoration by lining the leach pad and waste rock pile with clay or bentonite and then cover with topsoil could prevent the toxins from escaping to possibly kill animals or endanger human life are grossly inept.

As land owners living directly below this toxic waste site we feel the State of Montana should stop dragging their feet and taking the easy way out. We request a complete Environmental Impact Statement, so hopefully the job of reclaiming this mess is done right for a change. This situation has gone on way too long, and needs to be taken care of properly right now. ..."

Responses to Harrell, paragraphs 1 and 2: See responses to items 2, 4, 5, and 17.